

METHOD FOR IMPROVED SELECTIVITY IN PHOTO-ACTIVATION AND
DETECTION OF MOLECULAR DIAGNOSTIC AGENTS

ABSTRACT OF THE INVENTION

A method for the imaging of a particular volume of plant or animal tissue, wherein the plant or animal tissue contains at least one photo-active molecular agent. The method comprises the steps of treating the particular volume of the plant or animal tissue with light sufficient to promote a simultaneous two-photon excitation of the photo-active molecular agent contained in the particular volume of the plant or animal tissue, photo-activating at least one of the at least one photo-active molecular agent in the particular volume of the plant or animal tissue, thereby producing at least one photo-activated molecular agent, wherein the at least one photo-activated molecular agent emits energy, detecting the energy emitted by the at least one photo-activated molecular agent, and producing a detected energy signal which is characteristic of the particular volume of plant or animal tissue. The present invention also provides a method for the imaging of a particular volume of material, wherein the material contains at least one photo-active molecular agent.